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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,405	03/09/2001	Wolf-Dietrich Weber	02998.P013	5453

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EXAMINER

SIDDIQI, MOHAMMAD A

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 10/02/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,405

Applicant(s)

WEBER ET AL.

Examiner

Mohammad A Siddiqi

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-36 are presented for examination

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claim 1-36 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-25 of U.S. Patent No. 6182183 to Wingard. Although the conflicting claims are not identical, they are not patentably distinct from each other.

As per claim 20, the applicant claims discloses the claim 8 (U.S. Patent No. 6182183). However, U.S. Patent No. 6182183 does not recite communication apparatus comprises, initiator functional block, and target functional block. Other claimed limitation such as the initiator functional block associated withholds issuance of data transfers associated with the

thread identifier in response to the issuance of the busy signal, it is well known in the art to withhold data transfer on busy signal response because the data will not be accepted by the target functional block. Thus, it would have been obvious to one of the ordinary skill in the art at the time invention was made.

As per claim 1-19 and 21-36, they are rejected for similar reason.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1,2,14,20,21, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Wingard (U.S. Patent No. 6182183).

6. As per independent claims 1,14, 20 and 31, Wingard discloses a method for communicating data between functional blocks (col 17, lines 30-35), in a computing device, comprising:

establishing at least one thread identifier (col 16, lines 22-24), each thread identifier associating a data transfer(col 16, lines 22-24) with a transaction stream (col 16, lines 22 -25) that the data transfer between an initiator functional block and a target functional block are part of (col 16, lines 22-27);

if the target functional block is unable to accept a data transfer from the initiator functional block (col 17, lines 48-51), the target functional block issuing a busy signal identified by the thread identifier(col 17, lines 48-51) ;
and

the initiator functional block withholding issuance of data transfers associated with the thread identifier in response to the issued busy signal (col 17, lines 30-55), wherein data transfers not associated with the thread identifier identified by the issued busy signal may be issued (col 17, lines 48 - 55).

7. As per independent claims 2, and 21, Wingard discloses the busy signal comprises a signal that is maintained active when the target functional block is unable to accept data transfers (col13, lines 56-59).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3-13,15-19, 22-30, and 32-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wingard at el. (6182183) hereinafter (Wingard) in view of Courtright et al. (6493776).

10. As per claims 3 and 22, Wingard fails to expressly teach the busy signal comprises a credit signal used to communicate a number of credits that indicate how many data transfers the target functional block can accept, Courtright does, however, discloses the busy signal comprises a credit signal (col 12, lines 26-31) used to communicate a number of credits that indicate how many data transfers the target functional block can accept (col 12, lines 18-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use credit-based flow mechanism because it provides sender to keeps track of total number of cells transmitted, receiver keeps track of total number of cells forwarded, receiver sends "forward

count" to sender every N forwarded cells. When sender receives "forward count", it computes credit balance.

11. As per claims 4 and 23, Wingard does not teach decrementing the number of credits for each active data transfer and incrementing the number of credits upon freeing up of resources for further data transfers. However, Courtright discloses decrementing the number of credits for each active data transfer and incrementing the number of credits upon freeing up of resources for further data transfers (col 13, lines 50-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use credit-based flow mechanism because it provides a flexible mechanism in data transfer keeps track by incrementing and decrementing credit variable, credit variable specifies the number of additional packets allowed to be sent.

12. As per claims 5 and 24, Wingard does not teach the credit signal is generated by maintaining the signal in an active state for a number of clock cycles corresponding to the number of credits. However, Courtright discloses the credit signal is generated by maintaining the signal in an active state for a number of clock cycles corresponding to the number of credits (col 12, lines 18-46). Therefore, it would have been obvious to one of ordinary skill

in the art at the time of the invention to combine both teaching, because it provides mapping with clock cycle.

13. As per claims 6 and 25, Wingard does not teach the credit signal comprises a coded signal indicative of the number of credits. However, Courtright discloses the credit signal comprises a coded signal indicative of the number of credits (col 2, lines 20-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teaching, because it provides mapping with clock cycle

14. As per claims 7, 17, and 26, Wingard does not teach determining service guarantees for at least one transaction stream between initiator functional blocks and the target functional blocks. Courtright determining service guarantees for at least one transaction stream between initiator functional blocks and the target functional blocks (col 7, lines 54-67, it is inherent in flow control mechanism to integrate industry standard algorithms such as QOS to provide improve network or data transfer service to the application at the edges of the network nodes). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teaching, because it provides mapping with clock cycle

15. As per claims 8, 16, and 33 Wingard does not teach discloses the initiator functional block stopping to send data transfers so that the target functional block receives no more than a determined number of data transfers after issuance of the busy signal. However, Courtright discloses the initiator functional block stopping to send data transfers so that the target functional block receives no more than a determined number of data transfers after issuance of the busy signal (col 8 lines 49-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the Courtright implementation of the industry standard methods (credit-based) because it provides robust data transfer.

16. As per claims 9,15, 27 and 32, Wingard does not teach the target functional block issues a busy signal no more than a determined number of clock cycles after the target functional block determines that it has insufficient buffer space to receive data transfers from an initiator functional block. However, Courtright discloses the target functional block issues a busy signal no more than a determined number of clock cycles after the target functional block determines that it has insufficient buffer space to receive data transfers from an initiator functional block (col 7, lines 21-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the Courtright method of data masking because it provides mapping between logical state and physical state.

17. As per claim 10, Wingard does not teach discloses the target device buffering the data transfers received after issuance of the busy signal until resources become available to service the buffered data transfers. However, Courtright discloses the target device buffering the data transfers received after issuance of the busy signal until resources become available to service the buffered data transfers (col 9, lines 16-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the to utilize the Courtright implementation of the industry standard methods (credit-based) because it provides robust data transfer.

18. As per claims 11, 18,28, and 34, Wingard does not teach mapping the transaction stream to data channels of components between an initiator device and target device, converting performance guarantees of selected data channels of the mapped transaction stream such that the guarantees of the data channels are aligned to be uniform in units, aggregating the guarantees of the data channels for the transaction stream. However, Courtright discloses mapping the transaction stream to data channels of components between an initiator device and target device (col 1, lines 34-43);

converting performance guarantees of selected data channels of the mapped transaction stream such that the guarantees of the data channels are aligned to be uniform in units (col 3, lines 32-58, col 7, lines 54-67, it is inherent in flow control mechanism to integrate industry standard algorithms /protocol such as QOS to provide improve network or data transfer service to the application at the edges of the network nodes); and

aggregating the guarantees of the data channels for the transaction stream (col 15, lines 56-67, it is inherent in flow control mechanism to integrate industry standard algorithms /protocol such as QOS to provide improve network or data transfer service to the application at the edges of the network nodes). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine both teachings, because it provides the use of industry standard protocol in data transfer that provides guarantees.

19. As per claims 12,19,29, and 35, Wingard does not teach aggregating comprises a function selected from the group consisting of summing the guarantees of the data channels of the transaction stream, selecting the maximum guarantees of the data channels of the transaction stream, and selecting the minimum guarantees of the data channels of the transaction stream. However, Courtright discloses aggregating comprises a function selected from the group consisting of summing the guarantees of the data

channels of the transaction stream, selecting the maximum guarantees of the data channels of the transaction stream, and selecting the minimum guarantees of the data channels of the transaction stream (Col 15, lines 57-67, and col 16, lines 29-53, and col 17, lines 23-44), it is inherent in flow control mechanism to integrate industry standard algorithms such as QOS to provide both high and low level guarantees). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the Courtright implementation of the industry standard methods (credit-based) and use QOS parameter because it provides robust data transfer.

20. As per claims 13, 30, and 36, Wingard does not teach service guarantees, performance guarantees, bandwidth guarantees, latency guarantees. However, Courtright discloses the guarantees are selected from the group consisting of quality of service guarantees, performance guarantees, bandwidth guarantees, latency guarantees, maximum outstanding request guarantees and maximum variance in service latency guarantees (col 16, lines 17-21, it is inherent in flow control mechanism to integrate industry standard algorithms such as QOS to provide bandwidth, latency, jitter and loss guarantees). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the

Courtright implementation of the industry standard methods (credit-based) and use QOS parameter because it provides robust data transfer.

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Telecommunications Protocol and Design by Spragins (ISBN: 0-21-09290-5, July, 1992).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A Siddiqi whose telephone number is (703) 305-0353. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MAS



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